

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date
13 October 2005 (13.10.2005)

PCT

(10) International Publication Number
WO 2005/095632 A2

(51) International Patent Classification⁷:

C12Q 1/00

(21) International Application Number:

PCT/EP2005/002454

(22) International Filing Date: 4 March 2005 (04.03.2005)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

04090087.0	5 March 2004 (05.03.2004)	EP
60/549,980	5 March 2004 (05.03.2004)	US
04090121.7	29 March 2004 (29.03.2004)	EP
04090483.1	9 December 2004 (09.12.2004)	EP

(71) Applicant (for all designated States except US): **BAYER CROPSCIENCE GMBH** [DE/DE]; Brüningstrasse 50, 65929 Frankfurt (DE).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **FROHBERG, Claus** [DE/DE]; Pilzwald 17, 14532 Kleinmachnow (DE). **KOETTING, Oliver** [DE/DE]; Choriner Strasse 23, 10435 Berlin (DE). **RITTE, Gerhard** [DE/DE]; Feuerbachstrasse 12, 14471 Potsdam (DE). **STEUP, Martin** [DE/DE]; Am Schlachtensee 116, 14129 Berlin (DE).

(74) Agent: **KOSSMANN, Jochen**; Bayer BioScience GmbH, Hermannswerder 20 a, 14473 Potsdam (DE).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declaration under Rule 4.17:

— of inventorship (Rule 4.17(iv)) for US only

Published:

- without international search report and to be republished upon receipt of that report
- with (an) indication(s) in relation to deposited biological material furnished under Rule 13bis separately from the description

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

WO 2005/095632 A2

(54) Title: METHODS FOR IDENTIFYING PROTEINS WITH STARCH PHOSPHORYLATING ENZYMATIC ACTIVITY

(57) **Abstract:** The present invention relates to a method for identifying proteins involved in the phosphorylation of starch and nucleic acids which code for such proteins. The present invention further relates to plant cells and plants which exhibit an altered activity of a protein which can be identified using the method according to the invention. Plant cells and plants of this type synthesise a modified starch. The present invention therefore also relates to the starch synthesised by the plant cells and plants according to the invention as well as to methods for the manufacture of this starch and to the manufacture of starch derivatives of this modified starch.